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(56) Documents Cited

GB 2313774 A GB 2164392 A GB 2143283 A

GB 2061116 A GB 1267757 A US 4941600 A

US 4789261 A US 3794217 A

(58) Field of Search

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(54) Abstract Title

Cleansing device

(57) A cleansing device comprises a brush 21 attached to a body in which an aerosol container 13 of cleaning fluid is housed. A spring loaded nozzle 15 on the aerosol container 13 seats on an anvil 16 at one end 18 of the body, and a duct 17, which may be flexible, provides a passageway for dispensed fluid to flow from the anvil 16 to the bristles of the brush 21. Dispensing of cleaning fluid is achieved by actuating a trigger 23 located next to a handle 22 at the other end of the body, which moves the aerosol container 13 towards the anvil 16, depressing the nozzle 15. The trigger 23 may be governed by a lock or tamper proof device, or may include a timing or interrupting device to limit the amount of fluid that may be dispensed over a period of time.

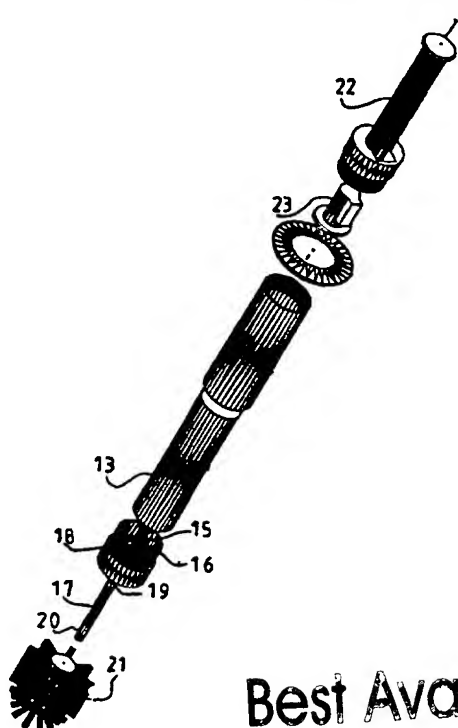


Fig 2

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1995

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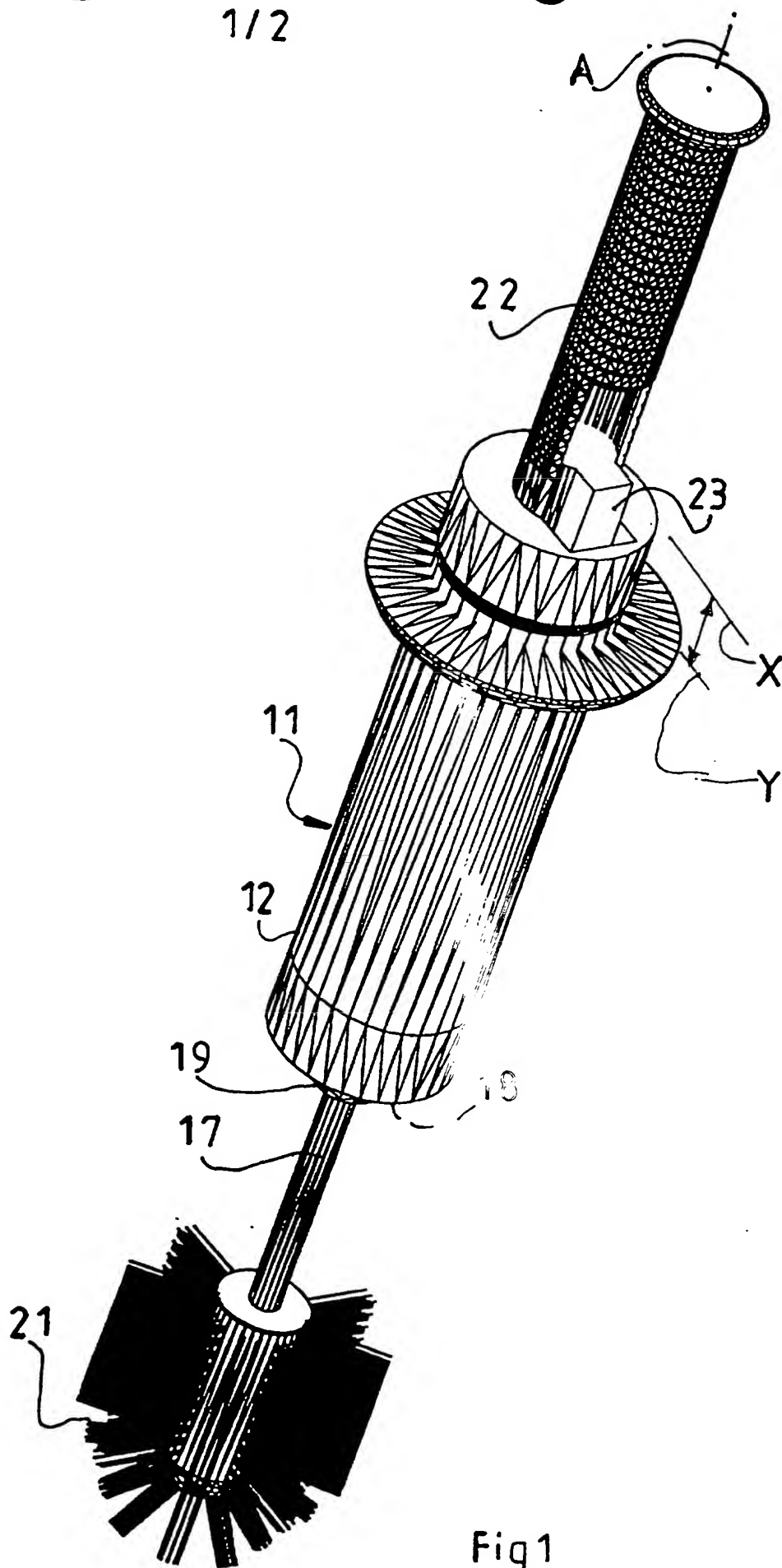


Fig 1

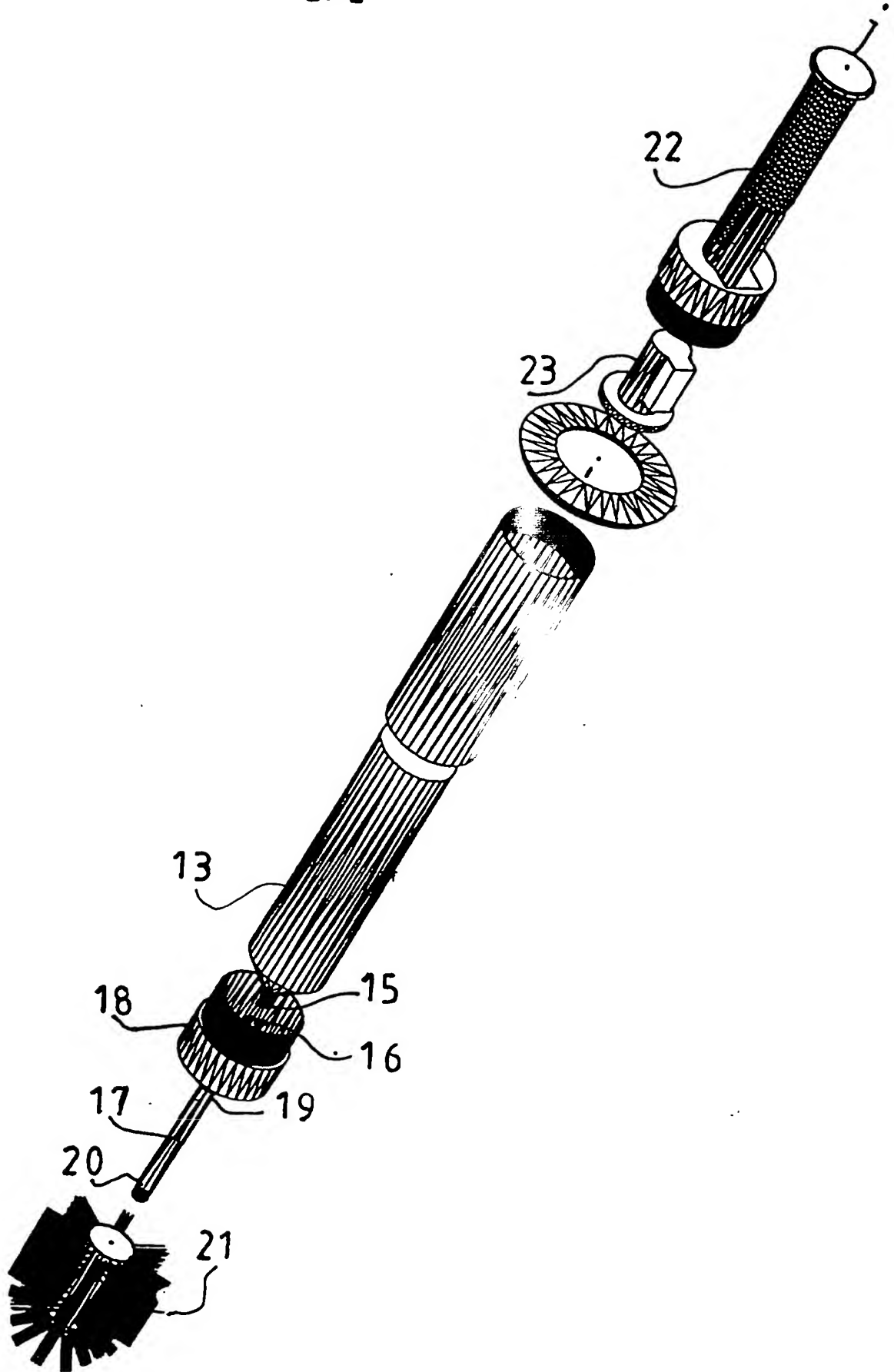


Fig 2

CLEANSING DEVICE

This invention relates to a cleansing device. In particular it is concerned with a cleansing device whereby strong cleansing solutions can be used in a safe way with reduced likelihood of accidental spillage.

A conventional WC toilet bowl has an upper rim (which opens downwardly) from which the sides of the bowl curve down to a water filled lower section. The side walls are readily viewable and accessible to sprayed or poured liquid. However the rim region is not readily viewed or accessible. It serves as the entry region for flush water directing the flow around the upper part of the bowl to provide a downward flow of flush water over the side walls. As a virtually in-line entry flow path the rim region can be subject to depositions of hard water salts caused by the water quite apart from locations for germs. Depositions in the rim area can also serve to adversely affect the flow of water from the rim into the bowl to the extent that there is no flush flow at all over parts of the side walls.

There is thus a requirement for a cleaning means for a WC toilet bowl to include not only the ability to direct a flow of cleaning liquid to a selected part of the bowl, including the rim region, but also to provide a positive contact means, such as a brush, whereby a region of the bowl can be subject to a wiping or brushing action.

According to the present invention there is provided a cleansing device comprising:

- a body member adapted to receive and hold a container of an aerosol unit having a nozzle outlet;
- means for locating a nozzle outlet of the aerosol unit at or towards one end of the body member;
- an outlet duct from one end of the body member adapted to communicate with the means for locating a nozzle outlet;
- a handle at the other end of the body member to the one end whereby the body, and so the outlet duct, can be directed to a surface to be cleansed; and

a trigger means accessible from the handle adapted to displace between a first and a second position an aerosol unit held by the body member:

the first position being one in which the nozzle outlet of the aerosol unit interacts with the datum means to cause the release of aerosol material from the unit by way of the outlet duct;

the second position being one in which the nozzle outlet serves to prevent the release of aerosol material.

Typically the outlet duct is equipped at its outer end with a brush through which aerosol released from the aerosol unit is caused to pass.

According to a first preferred version of the present invention the outlet duct is flexible to provide for the duct to be directed in various directions relative to the body member.

According to a second preferred version of the present invention or the first preferred version thereof the trigger means includes a lock or interlocking device and or a timing or interrupting device.

An exemplary embodiment of the invention will now be described with reference to the accompanying drawing of a cleansing device of which:

Figure 1 shows the assembled device; and

Figure 2 shows an exploded view of the device.

The drawings variously show a cleansing device comprising a body member 12 (with longitudinal axis A) adapted to receive and hold a container of an aerosol unit 13 having a conventional spring loaded nozzle 14 which seats on an anvil 16 in the body member 12.

Hollow outlet duct 17 projects from end 18 of body member 12. Inner end 19 of the duct 17 opens in the vicinity of the anvil 16. Near end 20 of the duct 17 has a brush 21 mounted on it with relatively widely spaced bristles. The outlet duct can be rigid or

flexible. If flexible then the duct is readily pushed against a surface to deflect the brush 21 in a direction at an angle to axis A (such as against a downwardly facing rim of a WC toilet bowl).

The body member 12 has a handle 22 located at the opposite axial end of the body member 12 to outlet duct 17.

Trigger 23 is located for longitudinal displacement parallel to axis A and serves to displace aerosol unit 13 between closed and open working positions (respectively positions X, Y).

On moving from position X to position Y the nozzle outlet 15 is driven against anvil 16 overcoming spring resistance in the nozzle member 14 thereby allowing the nozzle to release aerosol material from the container into outlet duct 17. While held in position Y the aerosol material will be dispensed into the outlet duct 17 and from thence pass out by way of brush 21 into contact with a surface in the vicinity of the brush 21. For as long as the trigger 23 is maintained depressed the aerosol unit 13 is held in a position where nozzle outlet 15 will maintain a flow of aerosol into outlet duct 17.

On releasing the trigger 23 the spring loading in the nozzle outlet 15 acts to drive the aerosol unit 13 upwardly to position X with consequent closure of the nozzle outlet 15 as termination of outward flow of aerosol material from the unit 13. The device can continue to be manipulated by handle 22 to move the brush 21 to be rubbed over a surface to be cleaned.

Since aerosol unit 13 is self contained and disposable it is possible to replace one unit containing a first aerosol content with another containing a different aerosol content to provide for a changed cleaning operation.

In view of the inherently self-dispersive nature of the dispersed aerosols the cleansing device does not retain dispensed material and is therefore safe for hazardous material that could be contacted by a user of the device 11.

The trigger 23 can be governed by way of a lock or a timing device to resist inadvertent or unauthorised dispensing aerosol material. The trigger can also include a timing and interrupting device so that, for example, following pressing the trigger 23 to cause aerosol material to be dispensed then once the material has been dispensed for a given period further dispensing ceases until the trigger 23 has been reset or following the passage of a given interval of time.

The cleansing device can be fabricated from a number of plastics materials, metals or alloys or combinations of these.

CLAIMS

1. A cleansing device comprising:

a body member adapted to receive and locate a container of an aerosol unit having a nozzle outlet;

a datum means for locating a nozzle outlet of an aerosol unit at or towards one end of the body member;

an outlet duct from one end of the body member adapted to communicate with the means for locating a nozzle outlet;

a handle at the other end of the body member to the one end whereby the body, and so the outlet duct, can be directed to an object to be cleansed; and

a trigger means accessible from the handle and adapted to displace between a first and a second position an aerosol unit located by the body member:

the first position being one in which the nozzle outlet of the aerosol unit interacts with the datum means to cause a release of aerosol material from the unit by way of the outlet duct; and

the second position being one in which the outlet serves to prevent the release of aerosol material.

2. A cleansing device as claimed in Claim 1 wherein the outlet duct is equipped at its outer end with a brush through which the aerosol released from the aerosol unit is caused to pass.

3. A cleansing device as claimed in any of the preceding claims wherein the outlet duct is capable to provide for the duct to be directed in various directions relative to the body member.

4. A cleansing device as claimed in any of the preceding claims wherein the trigger means includes a lock or tamper proof device for preventing engaging or interrupting discharge.

5. A leasing device as hereinbefore described with reference to the accompanying drawings.

Amendments to the claims have been filed as follows

CLAIMS

1 A cleansing device comprising:

a body member adapted to receive and locate a container of an aerosol unit having an nozzle outlet;

datum means for locating a nozzle outlet of an aerosol unit at or towards one end of the body member;

an outlet duct extending from one end of the body member and adapted to communicate at a first end with the datum means for locating a nozzle outlet and provide a passage from the first end to a second end remote from the first end;

a brush located on the outlet duct at a second end so that the brush is located remotely from the body member to which it is linked by way only of the duct;

an inextensible handle extending from the other end of the body member to the one end whereby the device can be directed to an object to be cleansed;

a trigger accessible from the handle located at or near the other end of the body member, the trigger being adapted to displace an aerosol unit located by the body member between first and second positions; the first position being one in which the nozzle outlet of the aerosol unit interacts with the datum means to cause the release of aerosol material from the unit by way of the outlet duct through the brush at the second end of the brush being in contact with an object for cleansing; and the second position being one in which the nozzle outlet serves to prevent the release of aerosol material.

2 A cleansing device as claimed in claim 1, wherein the outlet duct is at least partially flexible to provide for the duct and brush assembly to be directed in various directions relative to the body member.

3. A sensing device as claimed in any preceding claim, wherein the trigger means includes a lock or tamper proofing device and/or a means for halting or interrupting operation.

4. A sensing device as hereinbefore described with reference to the accompanying drawings.



INVESTOR IN PEOPLE

Applicant No: GB 991762.8
Claims searched: 1 to 5

Examiner: Robert Crowshaw
Date of search: 21 September 1999

Patent Act 1977 Search Report under Section 17

Documents searched:

UK Office collections, including EPO & US patent specifications, in:
UK (Ed.Q): A4K (KEA), FIR (E)
UK (Ed.6): B65D 32/00 (15/16)
Other online databases: EPDOC, JPL, SPI

Documents considered to be relevant:

Category	Quantity of document	Relevant to	Relevant to claims
A	2313774 A	(E)	
X	2164392 A	(NL) (O) aerosol dispenser in figure 1.	X: 1 Y: 3
X, Y	2143283 A	(O) aerosol dispenser in figure 1.	X: 1 Y: 3
X, Y	2061116 A	(D) aerosol dispenser in figures 1 & 2.	X: 1 Y: 3
X	1267757	(A) aerosol dispenser in figure 1.	X: 1 Y: 3
X, Y	789261	(O) aerosol dispenser with	X: 1, 2 Y: 3
Y	941600	(O) flexible	Y: 3
X	794217	(O) aerosol dispenser in figure 2.	X: 1 Y: 3

X
Y

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